

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 1. This sheet, which includes Fig. 1, replaces the original sheet including Fig. 1.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

Claims 1, 5, and 8–20 are active in this case. Claims 2–4, and 6–7 have been canceled. Claims 13–20 are newly added claims. Support for claim 13 and claim 14 can be found in the paragraph on page 7 of the Specification beginning on line 14. Claims 3 and 7 are canceled but the limitations of these claims have been incorporated into claim 1. The units described in now-canceled claim 3 are corrected to show “L/min.” (claim 1), which avoids the confusion highlighted by the Examiner. Claim 7 has been incorporated into claim 1; the objection to claim 7 is thereby obviated. Claims 8–10 have been rejected under 35 U.S.C. 112 as these claims purportedly do not have sufficient antecedent basis in the limitations of claim 1; the currently amended claim 1 does include “a coated graphite powder”, which obviates the rejections of claims 8–10.

Figure 1 has been objected to. The corrected drawing of Figure 1, which replaces the current Figure 1, is attached as a Replacement Sheet. The abstract has been rejected on the basis of 37 CFR 1.72(b) (see also MPEP 608.01(b)). Attached is an amended abstract which follows the proximity guidelines for abstracts. The paragraph on page 10, beginning on line 2, has been amended so that the terms “Hybridization System” and “Mechanofusion System” appear in lower case as these are not trademarked products.

Yoon et al., cited against the claims, disclose a method for preparing the anode of a lithium ion battery which comprises a crystalline carbon core and an amorphous carbon layer. The reference does teach similar parameters to the present invention (e.g. polyvinyl alcohol as the resin, similar average particle sizes and R values). However, the limitations to the surface area stated in claim 1 are not taught by Yoon et al.. With control over the specific surface area exhibited in the present invention, the amount of anode material that can be charged increases. This increase in charged anode material is not accompanied with a decrease in the electrochemical characteristics of the battery, which is shown in the data

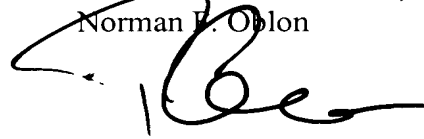
included in Figure 1. Because currently amended claim 1 includes further limitations that are not taught by Yoon et al., this reference does not anticipate the present invention nor teach one of ordinary skill in the art that this invention is obvious in view of the prior art.

Aihara et al. report a mixture of graphite powders of differing average particle sizes; however, no indication is given that these graphite powders are coated with a resin. Moreover, new claim 13 discloses a mixture of graphite powders that display two specific characteristics, which are not stated by Aihara et al.. Secondly, the minimum value of the graphite powder particle size ratio of claim 13 is 0.32, which is greater than the maximum value of the analogous ratio of 0.3 described by the this reference. The reference does not teach nor anticipate a similar range in values for the particle size ratio. By incorporating the graphite powders with these particle sizes, the specific surface area of the anode can be controlled and the amount of charged material of the anode can be increased. These characteristics do not come with a cost in electrochemical performance of the battery, which is supported by the data of Figure 1. While the mixture of graphite powders disclosed in Aihara et al. could increase the amount of charged material at the anode, such a difference could result in the decomposition of the electrolytic solution, which would increase the irreversibility capacity of the battery. Therefore, one skilled in the art would not be compelled or motivated to replace the coated graphite powder of Yoon et al. with the uncoated graphite powder mixture of Aihara et al. to produce a graphite anode with the characteristics disclosed in claim 13.

No new matter is believed to have been added in the amended claims and introduction of new claims. An action on the merits and allowance of the claims are earnestly requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon

A handwritten signature in black ink, appearing to read 'R. Treanor', is written over a horizontal line.

Richard L. Treanor  
Registration No. 36,379

Customer Number

22850

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 08/07)